

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
APPLICATION FOR PERMIT TO APPROPRIATE STATE WATER
(SECTION 11.121, 11.042, 11.085 OR 11.143, TEXAS WATER CODE)
TAC CHAPTERS 30, 50, 281, 287, 288, 295, 297 AND 299
Water Supply Division, Water Rights Permitting MC-160**

P.O. Box 13087

Austin, Texas 78711-3087

Telephone (512) 239-4691, FAX (512) 239-4770

(if including a check, mail directly to P.O. Box 13088, Austin, TX 78711-3088)

Notice: This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol.

1. Applicant Information.

A. Applicant Name(s): Collin County Municipal Utility District No. 1 (CCMUD No. 1)

Mailing Address: 8401 North Central Expressway, Suite 350

Dallas, Texas 75252

Telephone Number: 214-292-3410

Fax Number: 214-292-3411

Email Address: rparr@huitt-zollars.com

B. Customer Reference Number (if issued): CN

Note: If you do not have a Customer Reference Number, complete Section II of the Core Data Form (TCEQ-10400) and submit it with this application.

C. Fees and Penalties

Applicant owes fees or penalties?

☐ Yes

☒ No

If yes, provide the amount and the nature of the fee or penalty as well as any identifying number:

D. Lienholder Information

Provide this information on the holder of any liens on any land to which the water right would be appurtenant):

Doss, Ltd.

2. Dam (structure), Reservoir and Watercourse Data.

A. Type of Storage Reservoir (indicate by checking (✓) all applicable)

☐ on-channel ☒ off-channel ☐ existing structure ☐ proposed structure* ☐ exempt structure**

* Applicant shall provide a copy of the notice that was mailed to each member of the governing body of each county and municipality in which the reservoir, or any part of the reservoir, will be located as well as copies of the certified mailing cards.

** TWC Section 11.143 for uses of water for other than domestic, livestock, or fish and wildlife from an existing, exempt reservoir with a capacity of 200 acre-feet or less. Please complete Paragraph 6 below if proceeding under TWC 11.143.

Date of Construction: Proposed June 2016

B. Location of Structure No. 1 (Amenity Pond)

- 1) Watercourse: Near confluence of tributaries F and G of Doe Branch
- 2) Location from County Seat: 11 miles in a NW direction from McKinney,
Collin County, Texas.
Location from nearby town (if other than County Seat): 3.1 miles in a SSE direction
from Celina, Texas, a nearby town
shown on county highway map.
- 3) Zip Code: 75009
- 4) The dam will be/is located in the John Ragsdale Original Survey No. N/A,
Abstract No. 734 in Collin County, Texas.
- 5) Station 80+51.90 on the centerline of the dam is 08.6628° SW (bearing), 3086.80 feet
(distance) from the NE corner of John Ragsdale Survey Original Survey
No. N/A, Abstract No. 734, in Collin County, Texas, also being at Latitude 33.282870° N,
Longitude 96.803300° W.

Provide the Latitude and Longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location.

C. Reservoir:

- 1) Acre-feet of water impounded by structure at normal maximum operating level: 157.37
- 2) Surface area in acres of reservoir at normal maximum operating level: 10.41 AC

D. Drainage Area

The drainage area above the dam is 2148.5 acres or 3.36 square miles.

E. Other

- 1) If this is a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service (SCS)) floodwater-retarding structure, provide the Site No. N/A
and watershed project name N/A
- 2) Do you request authorization to close the "ports" or "windows" in the service spillway?

☐ Yes ☒ No

3. Appropriation/Diversion Request (total amount of water needed, including maximum projected uses and accounting for evaporative losses for off-channel storage, if applicable).

A. Appropriated water will be used as follows:

	Purpose*	Place of Use	Acre-feet per year
1)	evaporation	Light Farms North Park	94.69
2)	Irrigation	Light Farms North Park	289.83
3)			

*If agricultural use, list crops(s) to be irrigated:

N/A

B. Lands to be irrigated (if applicable):

- 1) Applicant proposes to irrigate a total of 92.51 acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of 195 acres in Collin County, Texas. A copy of the deed(s) describing the overall tract(s) with the recording information from the county records is attached.
- 2) Location of land to be irrigated: In the John Ragsdale & Collin County School Original Survey No. N/A & No. 14 (respectively), Abstract No. 734 & 167 (respectively).

C. Diversion Point No. 1 _____

- 1) Watercourse: Near confluence of tributaries F and G of Doe Branch.
- 2) Location of point of diversion at Latitude 33.280958° N, Longitude 96.802962° W, Provide Latitude and Longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location..

also bearing 05.3408° SW, 3761.78 feet

(distance) from the NE corner of the John Ragsdale Survey Original Survey No. N/A, Abstract No. 734, Collin County, Texas.

- 3) Location from County Seat: 11 miles in a NW direction from McKinney, Collin County, Texas.

Location from nearby town (if other than County Seat): 3.1 miles in a SSE direction from Celina, Texas, a nearby town shown on county highway map.

- 4) Zip Code: 75009
- 5) The diversion will be (check (√) all appropriate boxes and if applicable, indicate whether existing or proposed):

	Directly from stream	Existing	Proposed
	From an on-channel reservoir		
	From stream to an off-channel reservoir		
	From a stream to an on-channel reservoir		
	From an off-channel reservoir		√
	Other method (explain fully, use additional sheets if necessary)		

- 6) Rate of Diversion (Check (√) applicable provision):

___ 1. Diversion Facility:

- A. 1,102.8 Maximum gpm (gallons per minute)
- B. 2 Number of pumps
- C. Submersible Type of pump
- D. ±550 gpm, Pump capacity of each pump

E. Portable pump _____ Yes or X No.

2. If by gravity:

A. _____ Headgate _____ Diversion Dam _____ Maximum gpm

B. _____ Other method (explain fully - use additional sheets if necessary)

7) The drainage area above the diversion point is 2148.5 acres or 3.36 square miles.

D. Return Water or Return Flow (location and quantity information, provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location):

Water which is diverted but not consumed as a result of the above stated use, will be returned to

Tributary F, tributary of Doe Branch &

Tributary G, tributary of Doe Branch,

Trinity Basin, at a point which is at Latitude 33.281282° N, Longitude 96.801531° W, also, bearing
01.3475° SE (direction), 3621.53 feet (distance) from the

NE corner of the John Ragsdale Survey Original Survey

No. N/A, Abstract No. 734, in Collin County, Texas.

Zip Code: 75009

Estimated annual amount of return flow to said stream will be 0 acre-feet.

E. Surplus Water (provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location):

Water which is diverted but not used beneficially will be returned to N/A,

tributary of _____, _____ Basin at a point

which is at Latitude _____°N, Longitude _____°W, also

bearing _____° (direction), _____ feet

(distance) from the _____ corner of the _____ Original Survey

No. _____, Abstract No. _____, in _____ County, Texas.

Zip Code: 75009

4. Discharge Point Information (If applicable, provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location).

Discharge Point No. or Name: N/A

A. Select the appropriate box for the source of water being discharged:

☐ Treated effluent

☒ Groundwater

☐ Other _____

B. Location of discharge point will be/is at Latitude 33.281282° N, Longitude 96.801531° W,

also bearing 01.3475° SE, 3621.53 feet from the NE corner of the John Ragsdale Survey Original Survey No. N/A, Abstract No. 734, in Collin County, Texas.

What method was used to determine the Latitude and Longitude for the discharge point? (i.e., GPS Unit, USGS 7.5 Topographic Map, etc.)

GPS Survey

- C. Location from County Seat: 11 miles in a NW direction from McKinney,
Collin County, Texas.
Location from nearby town (if other than County Seat): 3.1 miles in a SSE
direction from Celin, Texas, a nearby town shown on county highway map.
- D. Zip Code: 75009
- E. Water will be discharged into off-channel stream/reservoir,
(tributaries) F & G,
Trinity Basin.
- F. Water will be discharged at a maximum rate of 0.6684 cfs (300 gpm).
- G. The amount of water that will be discharged is 384.52 acre-feet per year.
- H. The purposed use for the water being discharged will be make-up water for irrigation and evaporation.
- I. Additional information required:
For groundwater
- 1) Provide water quality analysis and 24 hour pump test for the well if one has been conducted.
Water quality analysis provided by Hines, Inc.
 - 2) Locate and label the groundwater well(s) on a USGS 7.5 Minute Topographic Map ***Provided***
 - 3) Provide a copy of the groundwater well permit if it is located in a Groundwater Conservation District. ***N/A***
 - 4) What aquifer the water is being pumped from? ***Paluxy & Woodbine***
- For treated effluent
- 1) What is the TPDES Permit Number? Provide a copy of the permit.
 - 2) Provide the monthly discharge data for the past 5 years.
 - 3) What % of treated water was groundwater, surface water?
 - 4) If any original water is surface water, provide the base water right number.

5. General Information.

- A. The proposed X or existing _____ works will be (are) located on the land of CCMUD No. 1
_____, whose mailing address is 8401 North Central Expressway, Dallas, Texas
75252
- B. If an application for the appropriation is granted, either in whole or in part, construction works will
begin within 60 days _____ after such permit is issued. The proposed work will be
completed within 270 days _____ from the date the permit is issued.
- C. A Water Conservation Plan is attached? _____ Yes X No.
- D. X Interbasin transfer is not requested.
_____ Applicant requests authorization to transfer _____ acre-feet of water per year from the
_____ Basin to the _____ Basin of which
_____ acre-feet of water will be used for _____ purposes and

_____ acre-feet of water will be used for _____ purposes.

E. X Bed and Banks request to transfer 384.52 acre-feet of water per year within the bed and banks of Trib. F & G, tributary of Doe Branch, Upper Trinity River Basin.

F. Is this project located within 200 river miles of the coast? Yes X No Unknown

5. **Maps, plats, plans, and drawings accompany this application as required by applicable TAC Sections.**

 X Yes No. Attach additional sheets.

6. The dam(s) and reservoir(s) shown on the attached application was (were) constructed for domestic and livestock purposes and I/we elect to seek a permit under Section 11.143 of the Texas Water Code.

7. Provide information describing how this application addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement.

This project involves construction of new amenity ponds and a change of surrounding land use from agriculture to residential.

Applicant Name (Sign)

Applicant Name (Sign)

Applicant Name (Printed)

Applicant Name (Printed)

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20_____.

Notary Public for the State of Texas

Supplemental Dam/Reservoir Information Sheet

Dam (structure), Reservoir and Watercourse Data

A. Type of Storage Reservoir (Indicate by checking (✓) all applicable)

on-channel ☒ off-channel ☐ existing structure ☐ proposed structure* ☐ exempt structure**

* Applicant shall provide a copy of the notice that was mailed to each member of the governing body of each county and municipality in which the reservoir, or any part of the reservoir, will be located as well as copies of the certified mailing cards.

** TWC Section 11.143 for uses of water for other than domestic, livestock, or fish and wildlife from an existing, exempt reservoir with a capacity of 200 acre-feet or less. Please complete Paragraph 6 below if proceeding under TWC 11.143.

Date of Construction Proposed June 2016

B. Location of Structure No. 2 (Amenity Pond)

1) Watercourse: Tributary F of Doe Branch

2) Location from County Seat: 11 miles in a NW direction from McKinney,
Collin County, Texas.

Location from nearby town (if other than County Seat): 3.1 miles in a SSE direction from
Celina, a nearby town shown on county highway map.

3) Zip Code: 75009

4) The dam will be/is located in the John Ragsdale Survey Original Survey
No. N/A, Abstract No. 734 in Collin County, Texas.

5) Station 80+51.90 on the centerline of the dam is 08.6628° SW (bearing), 3086.80 feet
(distance) from the NE corner of John Ragsdale Survey Original
Survey No. N/A, Abstract No. 734, in Collin County, Texas, also
being at Latitude 33.282870° N, Longitude 96.803300° W.

Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location.

C. Reservoir:

1) Acre-feet of water impounded by structure at normal maximum operating level: 23.74

2) Surface area in acres of reservoir at normal maximum operating level: 2.66

D. The drainage area above the dam is 1227.1 acres or 1.92 square miles.

E. Other:

1) If this is a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service (SCS)) floodwater-retarding structure, provide the Site No. N/A and watershed project name _____

2) Do you request authorization to close the "ports" or "windows" in the service spillway?

☐ Yes ☒ No

Supplemental Dam/Reservoir Information Sheet

Dam (structure), Reservoir and Watercourse Data

B. Type of Storage Reservoir (indicate by checking (✓) all applicable)

☒ on-channel ☐ existing structure ☐ proposed structure* ☐ exempt structure**

* Applicant shall provide a copy of the notice that was mailed to each member of the governing body of each county and municipality in which the reservoir, or any part of the reservoir, will be located as well as copies of the certified mailing cards.

** TWC Section 11.143 for uses of water for other than domestic, livestock, or fish and wildlife from an existing, exempt reservoir with a capacity of 200 acre-feet or less. Please complete Paragraph 6 below if proceeding under TWC 11.143.

Date of Construction Proposed June 2016

B. Location of Structure No. 3 (Armenity Pond)

1) Watercourse: Tributary G of Doe Branch

2) Location from County Seat: 11 miles in a NW direction from McKinney,
Collin County, Texas.

Location from nearby town (if other than County Seat): 3.1 miles in a SSE direction from
Celina, a nearby town shown on county highway map.

3) Zip Code: 75009

4) The dam will be/is located in the John Ragsdale Survey Original Survey
No. N/A, Abstract No. 734 in Collin County, Texas.

5) Station 80+51.90 on the centerline of the dam is 08.6628° SW (bearing), 3086.80 feet
(distance) from the NE corner of John Ragsdale Survey Original
Survey No. N/A, Abstract No. 734, in Collin County, Texas, also
being at Latitude 33.282870° N, Longitude 96.803300° W.

Provide Latitude and Longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location.

C. Reservoir:

1) Acre-feet of water impounded by structure at normal maximum operating level: 20.38

2) Surface area in acres of reservoir at normal maximum operating level: 2.33

D. The drainage area above the dam is 921.4 acres or 1.44 square miles.

E. Other:

1) If this is a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service (SCS)) floodwater-retarding structure, provide the Site No. N/A and watershed project name _____

2) Do you request authorization to close the "ports" or "windows" in the service spillway?

☐ Yes ☒ No

Supplemental Environmental Information Sheet

Water right projects have the potential to alter environmental conditions in the state's rivers and streams through flow modification, sediment load alteration, loss of wetlands, and removal of riparian vegetation. The Resource Protection Team assess the effects issuance or amendment of a water right may have on existing instream uses. Instream uses include, but are not limited to, water quality, fish and wildlife habitat, recreation, and freshwater inflows to bays and estuaries.

The following items are suggested guidelines for data to be submitted depending on the nature of the particular application. Please note that *not* all the information identified below is required for the water right application to be considered administratively complete. However, depending on the magnitude and scope of the proposed project, failure to provide requested information for technical review may result in delayed processing times or a recommendation of denial of the application.

ITEMS TO BE PROVIDED FOR ALL APPLICATIONS:

1. USGS 7.5 minute topographic map with all diversion points, discharge points, reservoirs, and/or land to be irrigated clearly indicated. **Response: Map provided with points identified**
2. Photographs of the stream at the project area (i.e., diversion point/dam location) including upstream and downstream views. Photographs should be in color and reflect the existing conditions of the stream and the riparian vegetation. Each photograph should include a description of what is depicted as well as be referenced to the USGS topographic map indicating the location and direction of the shot. **Response: Photographs provided with exhibit.**
3. Brief description of the affected stream or water body at the project location including:
 - a) Average and maximum channel width and depth; **Response: Avg width 6' depth 3'; Maximum width 10' depth 6'.**
 - b) Flow characteristics of the stream (i.e., is the stream perennial, intermittent with pools, or intermittent?); **Response: perennial**
 - c) Description of land uses upstream within the watershed, if known. **Response: Agricultural**
4. Any known recreation or other public uses of the affected stream or water body. **Response: No recreation or public uses.**

ADDITIONAL ITEMS TO BE PROVIDED IF AN EXISTING DAM AND RESERVOIR ARE SOUGHT TO BE PERMITTED:

1. Date dam constructed.
2. Will the reservoir be maintained at normal pool elevation with an alternate source of water? Yes If so, identify the source of water. If groundwater will be used, see below.
3. Does the dam have an operational low flow outlet or other means to pass state water?

MINIMAL ADDITIONAL ITEMS TO BE PROVIDED IF A DAM AND RESERVOIR ARE PROPOSED TO BE CONSTRUCTED:

1. In addition to indicating the location of the project location on the USGS topographic map, please identify the area of lake inundation at normal pool level. **RESPONSE: Normal pool elevation for the large basin is at 620.5 ft and 624.5 for both of the two smaller basins.**
2. Provide a brief description of the area to be affected by the proposed dam and reservoir.

Response: See attached USACE application/permit.

3. The local U.S. Army Corps of Engineers (USACE) district should be notified of the proposed project. If the USACE determines that a 404 permit is required, provide the project number and name of the USACE Project Manager.
USACE Project Number: SWF-2009-00268
USACE Project Manager: Frederick Land (817)886-1729
4. Will the reservoir be maintained at normal pool elevation with an alternate source of water? Yes If so, identify the source of water. If groundwater will be used, see below. **Yes**
5. Will the dam have a low flow outlet or other means to pass state water? **Yes**

POSSIBLE ADDITIONAL ITEMS TO BE PROVIDED IF A DAM AND RESERVOIR ARE PROPOSED TO BE CONSTRUCTED:

1. A quantitative or qualitative evaluation of existing aquatic, riparian, wetland, and terrestrial habitats that will be subject to impact by the proposed reservoir project, preferably performed by a qualified third party. Acceptable evaluation procedures to be used may include, but are not limited to, USFWS's Habitat Evaluation Procedures or TPWD's Wildlife Habitat Appraisal Procedure. Any habitat evaluation should include an assessment of the effects of the project on habitats in the river segment downstream. **Response: See attached USACE application/permit.**
2. Description of the alternatives that were examined to meet the water needs that the proposed project is intended to fulfill. Were other site locations examined that may result in less environmental impact? How was the size of the proposed reservoir determined? Would a smaller reservoir be adequate to meet the projected water needs? Habitat mitigation shall be considered only after the complete sequencing (avoidance, minimization or modification, and compensation/replacement) process has been performed. **Response: See attached USACE application/permit.**
3. Should habitat losses be found to be unavoidable, a mitigation plan should be developed that will compensate for lost or altered ecosystem functions and values imposed by the proposed project. This plan should address both the direct and indirect impacts to aquatic, riparian, and terrestrial habitats, as well as short- and long-term effects that may result from the proposed project. Habitat mitigation plans shall be ensured through binding legal contracts or conservation easements and shall include goals and schedules for completion of those goals. Mitigation areas shall be managed in perpetuity by a party approved by the Commission to maintain the habitat functions and values that will be affected by the proposed project. **Response: See attached USACE application/permit.**

ADDITIONAL ITEMS TO BE PROVIDED IF GROUNDWATER WILL BE USED:

Information regarding the groundwater wells to be used in this project and groundwater quality data from each well to be used. Well information should include the following:

- a) Depth of well; **1600' Paluxy aquifer, 750' Woodbine aquifer**
- b) Name of aquifer from which water is withdrawn; **Paluxy & Woodbine**
- c) Pumping capacity of well. **240 gpm/60 gpm**

Water chemistry information should include but not be limited to the following parameters:

- a) Chlorides;

- b) Sulfates;
- c) Total Dissolved Solids (TDS);
- d) pH;
- e) Temperature.

Response: See attached test report

If data for on-site wells are unavailable, historical data collected from similar sized wells drawing water from the same aquifer may be provided. However, please note that on-site data may still be required when it becomes available.

Alternatives Analysis Worksheet for Wetland Impacts

1. Alternatives
 1. How could you satisfy your needs in ways which do not affect wetlands?
 2. How could the project be re-designed to fit the site without affecting wetlands?
 3. How could the project be made smaller and still meet your needs?
 4. What other sites were considered?
 1. What geographic area was searched for alternative sites?
 2. How did you determine whether other non-wetland sites are available for development in the area?
 5. What are the consequences of not building the project?
2. Comparison of alternatives
 1. How do the costs for the alternatives considered above?
 2. Are there logistic (location, access, transportation, etc.) factors that limit the alternatives considered?
 3. Are there technological limitations for the alternatives considered?
 4. Are there other reasons certain alternatives are not feasible?
3. If you have not chosen an alternative which would avoid wetland impacts, explain:
 1. Why your alternative was not selected?
 2. What you plan to do to minimize adverse effects on the wetlands impacted?
4. Please provide a comparison of each criterion (from Part II) for each site evaluation in the alternatives analysis.

**PERMIT APPLICATION COMPLETION CHECKLIST FOR
HYDROLOGY, WATER CONSERVATION, AND DAM SAFETY**

Name(s) of Applicant: **Collin County Municipal Utility District No. 1 (CCMUD No. 1)**

Stream, Basin, and County: **Tributaries F & G of Doe Branch, Trinity Basin, Collin County, Texas**

USGS 7.5 minute topographic map with all diversion points, discharge points, reservoirs, and/or land to be irrigated clearly indicated: **Celina, Texas 2010w**

Latitude and Longitude of all diversion points and/or reservoirs, including how the coordinates were determined:

Diversion amount:

Diversion rate:

Monthly Diversion Distribution (the amount of the total water that you plan to divert each month):

J F M A M J J A S O N D

Reservoir capacity and surface area:

Drainage area:

Request to use the bed and banks of a watercourse and/or reservoir:

Other (copy of contract for water, alternate source of water, accounting plan, etc.)

WATER CONSERVATION PLAN

1. Plan and appropriate data form
2. Please specify the quantitative goals as outlined on the data form

DAM SAFETY

If a reservoir is requested in the application, the following information should be submitted:

1. Surface area and capacity of the reservoir
2. Plans (with engineer's seal) for the reservoir if the dam is over 6 feet high
3. Engineer's signed and sealed hazard classification
4. Statement from engineer that the structure complies with the Chapter 299 Rules and supporting documentation

Light Farms Amenity Lake Operation for Low and High Flow Events

The Light Farms amenity lakes are situated adjacent to and at the confluence with Doe Branch and tributaries F and G to Doe Branch (refer to page 1 of the exhibit drawings). These ponds are located immediately upstream of the future Light Farms Way (CR 51) which will cross Doe Branch with a 400' proposed bridge. Each pond will have a normal pool elevation which will be maintained year-round. Tributary F naturally joins Doe Branch downstream of the future Light Farms Way while tributary G naturally joins Doe Branch upstream of the proposed bridge. The ponds have been designed such that tributaries F and G are left in their natural condition and will continue to convey low flows through the existing channel without over-topping into the proposed ponds. Low flows are defined as flows up to and including the 1-year storm event. Hydraulic models were developed for each of the four cross-sections shown on page 2 of the exhibit and the water surface elevation (WSEL) for the 1-year storm event was computed at each of these locations in order to confirm that these flows were contained within the existing channel of tributaries F and G. The results for each cross-section are plotted on page 3 of the exhibit drawings. Low flows from tributary F will be conveyed through a proposed culvert beneath Light Farms Way prior to entering Doe Branch. Low flows from tributary G will flow unencumbered to Doe Branch.

During higher flow events (storm events greater than the 1-year event) flows from Doe Branch and tributaries F and G will cause water surface elevations to rise and all ponds will begin to fill-up in response. During the 100-year storm event virtually the entire area will be submerged from backwater from Doe Branch.